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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,633	09/08/2003	Gary Bann	38326.00003.UTL1	3448
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PAUL, HASTINGS, JANOFSKY & WALKER LLP			WEST, LEWIS G	
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			2682	

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,633

Applicant(s)

BANN, GARY

Examiner

Lewis G. West

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Objections

Claims 20, 33, 36 and 37 is objected to because of the following informalities:

In claim 20, a typographical error appears to have occurred, wherein it is assumed that “base don’t eh” should have appeared as “based on the”, and will be treated as such for examination. Appropriate correction is required.

There are two claims addressed as claim 33, for examination they will be addressed in the rejection as “first occurrence” and “second occurrence” for clarity, as the two claims have different content (claim 33 is not provided in duplicate, the case is that two separate claims have been numbered the same). One of these claims should be renumbered, as this creates a lack of clarity. Correction is required.

Because claims 36 and 37 depend from claim 33, they are also objected to, and for examination will be treated as dependent from claim 25.

Further refer to Rule 1.126 in CFR Title 37, which can be found in the MPEP, for further guidance in the proper numbering of claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 11-15, 17-19, 24-29, 34-38, 40 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Chieu et al (US 5,995,019).

Regarding claim 1, Chieu discloses an RFID interrogator, comprising: an antenna configured to transmit and receive signals; an amplifier (AMPLIFIER MODULATOR, Fig. 4) configured to amplify a transmit signal; and an energy director (170) coupled with the antenna (185) and the amplifier, the energy director configured to receive the amplified transmit signal from the amplifier and send the amplified transmit signal to the antenna (Col. 4 line 64-Col. 5 line 1), and to receive a receive signal from the antenna and direct the receive signal to a receive path. (Col. 5 lines 62-65)

Regarding claim 2, the RFID interrogator of claim 1, wherein the antenna transmits signals to, and receives signals from, an RFID tag. (Col. 5 lines 1-9)

Regarding claim 3, the RFID interrogator of claim 1, wherein the energy director comprises a director at the input of the amplifier, and a director at the output of the amplifier. (Figure 4)

Regarding claim 4, the RFID interrogator of claim 3, wherein the directors are circulators. (Col. 6 lines 19-28)

Regarding claim 5, the RFID interrogator of claim 3, wherein the directors are directional couplers. (Col. 6 lines 19-28)

Regarding claim 11, the RFID interrogator of claim 1, wherein the energy director is coupled with an RF transceiver, configured to process the received signal. (Fig. 4)

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Regarding claim 12, the RFID interrogator of claim 11, wherein the energy director is configured to direct the receive signal around the amplifier and to the RF transceiver. (Col. 5 lines 62-65)

Regarding claim 13, the RFID interrogator of claim 11, wherein the energy director is configured to direct the transmit signal from the RF transceiver to the amplifier, and from the amplifier to the antenna. (Col. 4 line 64-Col. 5 line 1)

Regarding claim 14, the RFID interrogator of claim 11, wherein the RF transceiver is configured to send the receive signal to a decoder. (Col. 6 line 11-18)

Regarding claim 15, the RFID interrogator of claim 1, wherein the energy director is coupled with a switch, the switch configured to direct the transmit signal to one of a plurality of antennas. (Col. 9 lines 1-16)

Regarding claim 17, the RFID interrogator of claim 1, wherein the transmit signal is transmitted to a RFID tag. (Col. 5 lines 1-9)

Regarding claim 18, the RFID scanner of claim 1, wherein the received signal contains data from the RFID tag. (Col. 5 lines 1-9)

Regarding claim 19, a method for amplifying a transmit signal in a RFID interrogator, comprising: generating a transmit signal: amplifying the transmit signal to a certain power level; and transmitting the amplified transmit signal to at least one RFID tag. (Col 4 line 64- Col. 5 line 6)

Regarding claim 24, the method of claim 19, further comprising receiving a signal and routing the received signal around the amplifier via a bypass path. (Figure 4)

Regarding claim 25, an RFID interrogator system, comprising: an plurality of antennas configured to transmit and receive signals; and a plurality of amplifier switch block coupled with the plurality of antennas (Col. 8 lines 20-35), each of the plurality of amplifier switch blocks comprising: an amplifier configured to amplify a transmit signal; and an energy director coupled with the some of the plurality of antennas and the amplifier, the energy director configured to receive the amplified transmit signal from the amplifier and send the amplified transmit signal to the antennas, and to receive a receive signal from the antennas and direct the receive signal to a receive path.(Col. 5 line24-Col. 6 line 29)

Regarding claim 26, the RFID interrogator system of claim 25, wherein the plurality of antennas transmit signals to, and receives signals from, an RFID tag. (Col. 5 lines 1-9)

Regarding claim 27, the RFID interrogator system of claim 25, wherein the energy director comprises a director at the input of the amplifier, and a director at the output of the amplifier. (Fig. 4)

Regarding claim 28, the RFID interrogator system of claim 27, wherein the directors are circulators. (Col. 6 lines 19-28)

Regarding claim 29, the RFID interrogator system of claim 27, wherein the directors are directional couplers. (Col. 6 lines 19-28)

Regarding claim 34, the RFID interrogator system of claim 25, wherein the energy director is coupled with a RF transceiver, configured to process the received signal. (Fig .4)

Regarding claim 35, the RFID interrogator system of claim 34, wherein the energy director is configured to direct the receive signal around the amplifier and to the RF transceiver. (Col. 5 lines 62-65)

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Regarding claim 36, the RFID interrogator system of claim 33, wherein the energy director is configured to direct the transmit signal from the RF transceiver to the amplifier, and from the amplifier to the antenna. (Col. 4 line 64-Col. 5 line 1)

Regarding claim 37, the RFID interrogator system of claim 33, wherein the RF transceiver is configured to send the receive signal to a decoder. (Col. 6 line 11-18)

Regarding claim 38, the RFID interrogator system of claim 25, wherein the energy director is coupled with a switch, the switch configured to direct the transmit signal to one of the plurality of antennas. (Col. 9 lines 1-16)

Regarding claim 40, the RFID interrogator system of claim 25, wherein the transmit signal is transmitted to an RFID tag. (Col. 5 lines 1-9)

Regarding claim 41, the RFID interrogator system of claim 25, wherein the received signal contains data from the RFID tag. (Col. 5 lines 1-9)

Claims 19-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Ovard et al (US 6,356,764).

Regarding claim 19, Ovard discloses a method for amplifying a transmit signal in a RFID interrogator, comprising: generating a transmit signal; amplifying the transmit signal to a certain power level; and transmitting the amplified transmit signal to at least one RFID tag. (Col. 11 line 55-col. 12 line 23)

Regarding claim 20, Ovard discloses the method of claim 19, further comprising sensing the power level of the amplified transmit signal and generating a control signal based on the sensed power level. (Col. 12 lines 2-15)

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Regarding claim 21, Ovard discloses the method of claim 20, further comprising controlling the amplification of the transmit signal using the control signal. (Col. 12 lines 2-15)

Regarding claim 22, Ovard discloses the method of claim 20, further comprising generating a voltage signal based on the sensed power level of the transmit signal and rectifying the voltage signal. (Col. 12 lines 16-43)

Regarding claim 23, Ovard discloses the method of claim 20, further comprising controlling the amplification of the transmit signal so that the power level of the transmit signal is within certain limits. (Col. 12 lines 44-52)

Regarding claim 24, Ovard discloses the method of claim 19, further comprising receiving a signal and routing the received signal around the amplifier via a bypass path. (Figure 8)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chieu (US 5,995,019) in view of Lastinger (US 6,621,410)

Regarding claim 16, Chieu discloses the RFID interrogator of claim 1, which is switchably connectable to multiple antennas, but does not expressly disclose the energy director coupled to a plurality of switches. Lastinger discloses a system wherein the energy director (216) is coupled with a plurality of switches (222,226), each of the plurality of switches

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configured to direct the transmit signal to one or more of a plurality of antennas. (Figure 2 Col. 8 lines 8-27) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a plurality of switches to connect one or more antennas in order to adaptively change the response pattern of the antenna array to more efficiently locate tags.

Regarding claim 39, the RFID interrogator system of claim 25, which is switchably connectable to multiple antennas, but does not expressly disclose the energy director coupled to a plurality of switches. Lastinger discloses a system wherein the energy director (216) is coupled with a plurality of switches (222, 226), each of the plurality of switches configured to direct the transmit signal to one or more of a plurality of antennas. (Figure 2 Col. 8 lines 8-27) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a plurality of switches to connect one or more antennas in order to adaptively change the response pattern of the antenna array to more efficiently locate tags.

Claims 6-10 and 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chieu (US 5,995,019) in view of Ovard (US 6,356,764)

Regarding claim 6. Chieu discloses the RFID interrogator of claim 1, but does not expressly disclose a variable gain amplifier. Ovard discloses an RFID interrogator wherein the amplifier is a variable gain amplifier (VGA). (Col. 12 lines 16-24) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a VGA in order to aid in maintain relatively stable power levels in the amplifier and promote linearity.

Regarding claim 7, Chieu discloses the RFID interrogator of claim 1, but does not expressly disclose feedback loop control. Ovard discloses an RFID interrogator comprising a

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feedback loop coupled with the output of the amplifier, the feedback loop configured to sense the output energy from the amplifier and control the amplifier gain in response to the sensed output energy. (Col. 12 lines 14-43) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention use a feedback control loop to aid in maintain relatively stable power levels in the amplifier and promote linearity.

Regarding claim 8, the combination of Chieu and Ovard discloses the RFID interrogator of claim 7, wherein the feedback loop maintains the transmit signal energy at or below a certain level. (Col. 12 lines 44-52)

Regarding claim 9, the combination of Chieu and Ovard discloses the RFID interrogator of claim 7, wherein the feedback loop maintains the transmit signal energy at or above a certain level. (Col. 12 lines 44-52)

Regarding claim 10, the combination of Chieu and Ovard discloses the RFID interrogator of claim 7, wherein the feedback loop includes an energy coupler, a rectifier, and a power leveling network. (Col. 12 lines 14-43)

Regarding claim 30, Chieu discloses the RFID interrogator system of claim 25, but does not expressly disclose a variable gain amplifier. Ovard discloses an RFID interrogator system wherein the amplifier is a variable gain amplifier (VGA). (Col. 12 lines 16-24) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a VGA in order to aid in maintain relatively stable power levels in the amplifier and promote linearity.

Regarding claim 31, Chieu discloses the RFID interrogator system of claim 25, but does not expressly disclose feedback control. Ovard discloses and RFID interrogator system wherein

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each of the plurality of amplifier switch blocks further comprises a feedback loop coupled with the output of the amplifier, the feedback loop configured to sense the output energy from the amplifier and control the amplifier gain in response to the sensed output energy. (Col. 12 lines 14-43) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a VGA in order to aid in maintain relatively stable power levels in the amplifier and promote linearity.

Regarding claim 32, the combination of Chieu and Ovard discloses the RFID interrogator system of claim 31, wherein the feedback loop maintains the transmit signal energy at or below a certain level. (Col. 12 lines 44-52)

Regarding claim 33, (first occurrence), the combination of Chieu and Ovard discloses the RFID interrogator system of claim 31, wherein the feedback loop maintains the transmit signal energy at or above a certain level. (Col. 12 lines 44-52)

Regarding claim 33, (second occurrence) the combination of Chieu and Ovard discloses the RFID interrogator system of claim 31, wherein the feedback loop includes an energy coupler, a rectifier, and a power leveling network. (Col. 12 lines 14-43)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis G. West whose telephone number is 703-308-9298. The examiner can normally be reached on Monday-Friday 6:30-3:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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